DOCUMENT RESUME

ED 087 387 IR 000 126

TITLE Review of Budgeting Techniques in Academic and Research Libraries. ARL Management Supplement Volume One, Number Two.

INSTITUTION Association of Research Libraries, Washington, D. C. Office of Univ. Library Management Studies.

PUB DATE Apr 73

NOTE 4p.

EDRS PRICE MF-$0.65 HC-$3.29

DESCRIPTORS *Budgeting; *College Libraries; Cost Effectiveness; Library Planning; *Management; Performance Criteria; Program Budgeting; *Research Libraries; Techniques; *University Libraries

IDENTIFIERS Planning, Programming, Budgeting System; PPBS

ABSTRACT

Recent years have seen increased interest in extending the concept of budgeting to include activities related to planning, coordinating, and monitoring the entire operation of a library. There is strong evidence that the budgeting technique used can affect management potential. About 80% of total libraries use traditional line item or lump sum techniques, in which the library budget is an integral part of the university budget and must reflect the library as only one of many cost centers of the parent organization. Some universities are experimenting with performance budgeting, basing their expenditures primarily on measurable units of performance. Some are moving toward either program budgeting, based on service provided or what is called the Planning, Programming, Budgeting System (PPBS), which applies the concepts of both the program and performance budget methods. Others are using formula budgeting--a line-item technique based on quantitative models for fund allocation. For the most part, formula budgeting is being imposed on libraries from the outside, usually by state legislatures. Many parent institutions prefer formula over other budget techniques. (CH)

ASSOCIATION OF RESEARCH LIBRARIES
OFFICE OF
UNIVERSITY LIBRARY
MANAGEMENT STUDIES
1527 New Hampshire Avenue, N.W.
Washington, D.C. 20036
Phone (202) 232-8656

ARL MANAGEMENT SUPPLEMENT

ARL Management Supplement Vol. I No. 2 April, 1973

ED 087387

REVIEW OF BUDGETING TECHNIQUES IN ACADEMIC AND RESEARCH LIBRARIES

The concept and activities involved in library budgeting once were narrowly defined, and for the most part were thought of in terms of working with figures to produce a financial report. In recent years, however, there has been increased interest in extending the concept of budgeting to include activities related to planning, coordinating, and monitoring the entire operation of a library. There is increased recognition that budgeting is fundamental to library management because it provides administrators with a common language for communicating, and one basis for evaluating proposed plans of action and devising coordinated programs of operation.

Since research libraries are only one part of larger educational systems, and since these educational systems are often one part of a still larger governmental structure, basic decisions regarding budget development usually are made by the parent organization. Regardless of budgeting method used, however, there are two major functions of a budget: (1) to provide the parent organization with a framework upon which to allocate funds, and (2) to provide the library with guidelines for spending the monies received.

The Booz, Allen & Hamilton ARL-sponsored study of *Problems in University Library Management*, published in 1970, stresses that libraries are facing costs that are increasing faster than the general cost of living. The demands of larger and more complex colleges and universities are forcing libraries to expand in both traditional and new directions at the same time that governing agencies have increased their demands for budget justification. The library has to plan effectively and control expenditures to meet budget requirements while satisfying service requirements. Since the library competes for support with many other institutions which often have a better image or higher priority in the eyes of the fund controllers, the library must sell itself to these decision-makers and simultaneously effectively manage its operations if it is to compete successfully for funds.

When investigating budgeting techniques, several broad questions must be considered:

- Can the same management advantages be achieved under varying budget styles?
- Is it worth the time and effort involved to shift from a traditional style to one of the more "sophisticated" styles?
- If the budget technique is dictated by the parent institution, what additional techniques can be applied for the library's internal use?
- Can real budget reform be achieved, or is change likely to be only procedural?

Changes in thinking have been slow regarding the nature of budgeting and its potential as a management technique. While it can be argued that, in the end, the management utility of a budget will depend more on individual commitment to analysis and planning than on the particular form the budget takes, there is strong evidence that the technique used can, in fact, affect management potential. This *Supplement* reviews four budgeting techniques: traditional budgeting; performance budgeting; program/PPBS budgeting; and formula budgeting.

NOTE TO OUR READERS

The data for this Supplement was secured via OMS telephone interviews with the institutions referenced, office files, a Council on Library Resources Fellowship survey conducted by Ken Allen in 1972, and the results of a questionnaire survey of ARL members conducted in 1971 by Hal Young, a doctoral student at the University of Michigan.

The ARL Management Supplement is issued periodically as part of a continuing effort to establish channels of communication and provide forums for discussion of matters regarding library management. Each issue is devoted to a central theme, and contains news of activities, programs, research studies, and on-going projects involving various aspects of library management.

The success of this publication is dependent upon the information made available to us. We hope our readers will share with us information regarding their activities and that the publication of this information will stimulate direct exchanges among those individuals working in the several areas described.

IR 000 126

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

TRADITIONAL METHODS

There are two basic traditional budgeting techniques: line-item and lump sum. The line-item approach, the most widely-used budget style, uses major expenditure categories (e.g., salaries, supplies, equipment) as determined by the library and university administrators. The utility of this technique lies in its simplicity – to comprehend and to prepare. The amount of flexibility in assigning funds to various categories and the specificity of the categories govern the control derived from the budget. A well-thought-out line-item budget can be an effective management tool; funds can be identified and the flow of resources can be observed by both the library and the parent institutions. One problem observed by users of this method is that it is generally conceived of as an historical approach and does not always afford the necessary degree of justification for innovation or change. Another weakness is in its concentration on the flow of input into units with the possibility of little guidance or recognition of objectives to be accomplished.

The lump sum technique which allocates one amount to cover all library expenditures, presents the library with freedom and flexibility within the amount allocated. The management utility of the lump sum budget depends largely on what internal budget information the library develops.

In both line-item and lump sum budgeting, the library budget is an integral part of the university budget and must reflect the library as only one of many cost centers of the parent organization. The traditional library budget merely records, it does not solve any imbalance in funds, skills, or attitude that may exist. While examples of traditional budgets exist throughout the academic library community, well-documented models are difficult to locate. However, their preponderance is indicated by the results of a 1971 survey of fifty-nine ARL libraries carried out by Harold C. Young, a doctoral candidate at the University of Michigan. Young's survey indicated that 46 (78%) were using line-item budgets while two (3%) were using lump sum budgets, for a total of 81%.

PERFORMANCE BUDGETS

Performance budgets base expenditures primarily on measurable performance of activities and work progress. While a traditional budget simply records expenditures, the performance budget seeks to present a clear relationship between input of resources and output of services by the compilation of quantitative data concerning units of work of given functions. The development of a true performance budget requires cost analysis staff capability, work unit measurement at all levels, special accounting, and a considerable volume of processed statistical data. A danger of performance budgeting is the over-emphasis of control to the detriment of service. Because of staff monitoring requirements, this type of budgeting is not as widely used in academic libraries as is the simpler traditional approach.

Florida Atlantic University, University of California, Davis, University of Wisconsin

The Florida Atlantic University library went through a performance budget phase in the late sixties which is described in some detail in: Axford, H. William, "An Approach to Performance Budgeting at the Florida Atlantic University Library," *College and Research Libraries*, Vol. 32, No. 2 (March, 1971). The formula budgeting technique currently in use at Florida is described elsewhere in this *Supplement*.

The University of California, Davis, used performance budgeting until 1971, when the parent institution imposed formula budgeting. The pre-1971 budget was a lengthy, detailed document useful for both control and planning. The current budget is developed by the university's administration and while it allocates funds in two broad areas – acquisitions/processing and reference/circulation – the library may shift funds between these categories. For internal planning purposes, the library continues to develop detailed performance data for acquisitions and processing functions and projects financial impact of new programs. Additional information is available from: William McCoy, Associate University Librarian, University of California, Davis, California 95616.

The University of Wisconsin library experimented with performance budgeting in 1971, but returned to a line-item approach when it was judged that the increased effort had created only marginal advantages.

PROGRAM AND PPBS BUDGETING

Program budgeting differs from performance budgeting by emphasizing service provided, rather than units of work required; funds are applied because of their utility within given and accepted service objectives. Program budgeting provides the opportunity to present programs consistent with the needs and desires of the academic community at the time the request for funds is made, thereby allowing the governing group to better understand what their dollar will buy in the form of services meaningful to them. It is possible to present innovative programs in a more meaningful manner, making their costs more palatable. A disadvantage of program budgeting is that it is possible to fail to see clearly certain types of quantitative work-unit data needed to make judgments regarding cost effectiveness of specific operations.

The Planning, Programming, Budgeting System (PPBS) approach attempts to apply the concepts of both the program and performance budget methods by identifying service objectives and measuring and comparing by cost analysis the various ways of attaining those objectives. PPBS adds the dimension of long-range planning since it must consider the effects of programs over several budget periods. Fully implemented, it is a sophisticated planning and analysis tool which requires capabilities in cost-benefit analysis, statistical analysis, program planning, and accounting.

While many institutions have considered implementing PPBS, only a few have actually made a commitment to it. Some which have considered the technique or are moving toward implementation are discussed below.

Princeton University

An analysis of the adaptability of PPBS budgeting to colleges and universities was included in a major study and demonstration project at Princeton University. Funded by the Ford Foundation, the study dealt with the general areas of budgeting and resource allocation and lead the university to restructure both its approach to budgeting and its decision-making apparatus. A key role in the decision-making process is now played by a Priorities Committee, consisting of administrative officers, faculty, students, and staff. This Committee allocates the university's resources after reviewing each department's budget request within the context of the university's sliding four year provisional plan.

In the area of budgeting systems, the study indicates that PPBS could be only partially utilized at Princeton and cites the difficulty of quantifying goals and maintaining the system correct and current as two major disadvantages.

The library's budget is traditional line-item and serves primarily as a control document rather than a planning document. The library has the authority to shift funds among categories.

The complete report of the Ford Foundation supported study, *Budgeting and Resource Allocation at Princeton University*, is available from: Treasurer, Princeton University, 220 Nassau Hall, Princeton, New Jersey 08540 ($2.00). For additional information on the study's effect on the library's budgeting system, contact: Mr. Jay K. Lucker. Associate University Librarian, Princeton, New Jersey 08540.

Columbia University

The Columbia University Libraries are developing a program-accounting budgeting technique in which the library's operations are described by major organization units, broken down by library program: e.g., circulation; map facilities; personnel; acquisitions, etc. While compatible with the university's general budget system, it provides additional detail for internal library planning and control. The budget is expected to develop into a multi-year plan (3-5 years) and though not a conventional PPBS system, it will include detailed cost accounting. Budget data is supplied by department heads and divisional librarians, and a Planning and Policy Committee, chaired by the University Librarian, meets regularly on resource allocation and policy. For additional information, contact Mr. Jerome Yavarkovsky, Assistant University Librarian for Planning, Columbia University Libraries, New York, N.Y. 10027.

University of Utah

The University of Utah Library is using a modified PPBS budgeting system and evolving toward full PPBS in anticipation of the parent institution adopting full PPBS. Its use is currently restricted to presenting projected costs of new programs, but beginning next year the entire budget will be submitted in this form. For new programs, start-up costs and on-going costs are indicated separately, providing both the library and the University an understanding of the long-term effects of programs. In addition to program budgeting, detailed cost-analysis is done to indicate the relationship between work input and service output.

The library staff includes a Planning and Budgeting Officer and a systems analyst who work with Division heads and the Library Director in budget development. For additional information, contact: Mr. Richard Denman, Business Manager, University of Utah Library, Salt Lake City, Utah 84112.

Pennsylvania State University

In evolving toward a hybrid PPBS-Formula budget, Penn State has instituted programmed budgeting and a system of work-load activity indicators. For the library, these indicators are in such categories as volumes added, catalog maintenance, and facility usage; they are intended to indicate amount of work required to fulfill specific service objectives.

Currently, the library submits its budget in traditional line-item form, broken down to three categories: salaries, wages, and allotment. The last of these is further broken down by the library for internal control and planning. While five-year projections had been planned, this has been reduced to two years.

Additional information is available from Mr. Murray Martin, Acting Director, Pennsylvania State University Libraries, University Park, Pennsylvania 16802.

Joint Universities Libraries

The JUL is a corporate entity which receives its financial support from its three member institutions: Peabody, Scarritt and Vanderbilt. While support from the first two is from the institutions as a whole, Vanderbilt's support comes from its individual academic departments. In order to relate services delivered to support received, the JUL's Office of Research and Development is developing a multi-year budget and planning process which incorporates aspects of PPBS. This system identifies and relates the costs of operating the library via a program costing procedure that distributes the member institutions' financial support by the number of library items ordered by each academic department and the use/circulation of materials that is traced to each department.

The JUL's budget approach has been generated internally, not imposed by the supporting institutions. Aspects of the system that currently operate include: a static proposal – number of staff required to accomplish current objectives; a base-line proposal – identification of low priority items for cost savings to free funds for higher priority items; and a growth budget – services or resources which should be instituted or augmented if additional funds are available.

The JUL's work in this area has been supported by a grant from the Council on Library Resources and additional information can be obtained from: James Hopkins, Director, Office of Research and Development, Joint Universities Libraries, Nashville, Tennessee 37203.

FORMULA BUDGETING

Formula budgeting is a line-item budget technique based upon quantitative models and sets numeric guidelines for fund allocation relative to pre-established standards of adequacy and accepted levels of attainment. It is an attempt to mathematically balance the distribution of available resources to the organizations within one jurisdiction. Fully-implemented, it is a yardstick of expenditure with very little management flexibility available to the library involved.

For the most part, formula budgeting is being imposed on libraries from the outside, usually by state legislatures. Intelligent formula development demands the recognition of differences in the institutions within the system. If these differences are not considered, time and energy will be spent competing for funds, developing areas of non-comparability, or working up supplementary budget presentations beyond the formula. There are four general reasons why many parent institutions prefer formula over other budget techniques:

1. Formula budgeting is mechanical, therefore easier to prepare;
2. Because of its application to all institutions in the political jurisdiction, there appears to be justification for the monies requested;

3. The governing bodies have a sense of equity because each institution in the system is measured against the same criteria;
4. Fewer budgeting and planning skills are required to prepare and administer a formula budget.

Formula budgeting varies widely in approach and elements covered, but the basic techniques evolved from the Clapp-Jordan thesis. [See Clapp, V. W. and Jordan, R. T., "Qualitative Criteria for Adequacy of Academic Library Collections," *College and Research Libraries*, 25:5 (September, 1965), 371-380.]

The following examples illustrate some of the variety of formula budget approaches. They are discussed in considerably more detail in Allen, Kenneth S., *Current and Emerging Budgeting Techniques in Academic Libraries, Including a Critique of the Model Budget Analysis Program of The State of Washington* (1972), scheduled to be available from the ERIC Document Reproduction Service in May, 1973.

Washington State

The Washington State formula merges elements of the Clapp-Jordan model and the proposed California staffing formula, producing variables used to compute the resources required to provide a minimally adequate collection. These variables include: an allowance per each full-time equivalent faculty member; an allowance per full-time equivalent student; allowances for work at the masters level; and an allowance per doctoral field.

Under the Washington formula when the resource entitlement has been established, it is then necessary to establish the number of technical processes staff needed to process the number of units to be acquired, and the number of units to be deleted. The computational process is then utilized to arrive at formula entitlement for technical processes. Public services staffing is basically a function of the number and the course level of the students. Weights are assigned and again, formula entitlement computed.

The Washington formula is discussed in detail in *A Model Budget Analysis System for Program 05 Libraries*, available from Denis J. Curry, Director, Office of Interinstitutional Business Studies, The Evergreen State College, Olympia, Washington 98501.

Florida

The Florida formula is a hybrid version of the Washington formula; modifications were introduced in order to make budget requests more palatable to the legislature. Basic changes were made in the formula computation for library resources: the allowance for materials in the masters programs where the doctorate was the terminal degree was completely eliminated; the allocation to masters programs where there was no doctorate was increased; the blanket allocation to doctoral programs was reduced. Technical service staffing levels are identical except that Florida makes no provision for weeding the collection; public service staff weightings are reduced.

California

The California State College formula has an entirely different basis from Washington. Resource requirements are based on U.S. Office of Education standards with modifications dictated by local conditions. Under this formula the resources of nearby academic institutions are utilized and technical services staff is based on current operating activities. The Public Service staffing formula is more sophisticated, consisting of: staffing for the number of required manned stations; acknowledgment that graduate students require a higher level of library service than undergraduates; and finally, sensitivity to changes in workload.

Unlike the Washington and Florida formulas, the California State College formula has an additional allowance for managerial and administrative positions. These include the Director of Libraries, his assistant(s), his secretarial staff, systems analysts and collection development officer. These allocations are based on the size of enrollment. The California formula is discussed in: California (State) Colleges, *Report on the Development of the California State College Libraries: A Study of Book, Staffing, and Budgeting Problems*, Los Angeles, California: Office of the Chancellor, Division of Academic Planning (1970).

State University of New York

The State University of New York formula produces only a recommended staffing level. The basis was the operational data collected from eleven libraries. From detailed surveys, standard times for numerous basic library functions were compared to five basic library characteristics: (a) holdings; (b) acquisitions; (c) FTE users; (d) headcount students; and (e) faculty and staff. Three classes of institutions were identified: Agricultural and Technical, Liberal Arts Colleges, and University Centers. Each of these had different standard times for performing the various library functions. The technical services staffing level was determined by applying a series of weighted standard times to the size of collections on a certain date and also to the acquisition rate. There is an additional formula for public services staffing. Finally, there are two formulas which provide an amount of money to the library with the division of these funds left to the librarian. See: New York (State) State University of New York, *Library Manpower: A Preliminary Study of Essential Factors Contributing to Library Staffing Patterns*, Albany, New York: State University of New York, Division of the Budget (1968).

Ontario

The Ontario formula provides an amount of money to each higher institution as a whole, with this amount to be divided by the institutions' administrations. This funding is determined by the number of full-time equivalent students; weightings are based on instructional level and areas of instruction. For additional information, see: Ontario (Province of Canada), Minister of University Affairs. *A Formula for Operating Grants to Provincially-Assisted Universities in Ontario*. Toronto, Ontario, Department of University Affairs (1968).

The ARL Management Supplement is issued periodically by the Office of University Library Management Studies. Editors of this Supplement are Kenneth Allen, Associate Director of Libraries at the University of Washington, and Jeff Gardner, Management Research Specialist. The Office of Management Studies is administered by the Association of Research Libraries and funded by the Council on Library Resources. The purpose of the Office is to assist research libraries in effectively serving the academic and research communities through the sound management of resources available to them. Please address correspondence to Duane Webster, Director, or Jeff Gardner, Office of University Library Management Studies Office, Association of Research Libraries, 1527 New Hampshire Avenue, N.W., Washington, D.C. 20036.